

Comparisons of Job Characteristics

Focus Occupation: [Civil Engineering Technicians \(17-3022\)](#)

Associated Occupation: [Environmental Science and Protection Technicians, Including Health \(19-4091\)](#)

[Compare Knowledge](#)

[Compare Skills](#)

[Compare Abilities](#)

[Compare Detailed Work Activities](#)

[Compare Tools and Technologies](#)

<<	Focus occupation element is much lower
<	Focus occupation element is lower
0	Focus occupation element is at a similar level
>	Focus occupation element is at a higher level
>>	Focus occupation element is at a much higher level

Knowledge

Similarity of Focus Occupation to Associated Occupation: 57

Focus Occupation: Civil Engineering Technicians (17-3022)

Associated Occupation: Environmental Science and Protection Technicians, Including Health (19-4091)

Associated Occupation's Key Knowledge Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation
Computers and Electronics	8.4	13.6	10.8	<	Expanded education and/or training may be required
Chemistry	4.8	13.2	3.6	<<	Extensive education and/or training may be required
Biology	3.7	11.4	2.8	<<	Extensive education and/or training may be required
Public Safety and Security	6.9	11.1	10.6	0	Current knowledge level may be sufficient
Physics	4.3	9.9	7.0	<<	Extensive education and/or training may be required
Law and Government	5.9	9.8	6.7	<<	Extensive education and/or training may be required
Geography	3.9	9.7	9.0	0	Current knowledge level may be sufficient

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Skills

Similarity of Focus Occupation to Associated Occupation: 89

Focus Occupation: Civil Engineering Technicians (17-3022)

Associated Occupation: Environmental Science and Protection Technicians, Including Health (19-4091)

Associated Occupation's Key Skills Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation
Science	4.5	10.3	5.4	<<	Extensive development of skills in this area may be required
Mathematics	6.2	9.2	8.7	0	Current skill level may be sufficient
Operations Analysis	5.0	7.9	7.9	0	Current skill level may be sufficient

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Abilities		Similarity of Focus Occupation to Associated Occupation: 91			
Focus Occupation: Civil Engineering Technicians (17-3022)					
Associated Occupation: Environmental Science and Protection Technicians, Including Health (19-4091)					
Associated Occupation's Key Abilities Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation	
Written Expression	9.8	12.9	11.4	<	Some improvement in abilities may be required
Near Vision	11.1	12.8	12.6	0	Current ability level may be sufficient
Mathematical Reasoning	6.3	9.1	10.3	>	Current ability level is likely sufficient
Number Facility	6.3	9.0	9.2	0	Current ability level may be sufficient
Rate Control	3.8	6.7	1.0	<<	Extensive improvement in abilities may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Activities that Both Occupations Have in Common		Similarity of Focus Occupation to Associated Occupation: 72
Focus Occupation: Civil Engineering Technicians (17-3022) Associated Occupation: Environmental Science and Protection Technicians, Including Health (19-4091)		
Work Activities	Exclusivity of Activity	
Analyze scientific research data or investigative findings	27	
Communicate technical information	4	
Develop plans for programs or projects	31	
Draw maps or charts	69	
Explain complex mathematical information	30	
Inspect facilities or equipment for regulatory compliance	51	
Perform safety inspections in industrial, manufacturing or repair setting	32	
Prepare safety reports	60	
Prepare technical reports or related documentation	22	
Use chemical testing or analysis procedures	54	
Use knowledge of materials testing procedures	70	
Use knowledge of metric system	39	
Use precision measuring tools or equipment	17	
Use scientific research methodology	21	

Not all positions in these occupations will necessarily perform all of the listed activities. The exclusivity rating is an indication of how unique the activity is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations engage in that activity.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Tools and Technologies that Both Occupations Have in Common

Similarity of Focus
Occupation to Associated
Occupation: 72

Focus Occupation: Civil Engineering Technicians (17-3022)

Associated Occupation: Environmental Science and Protection Technicians, Including Health (19-4091)

Tools and Technologies	Exclusivity
Chemical evaluation instruments and supplies	10
Computer data input devices	2
Computer printers	2
Computers	1
Content authoring and editing software	1
Electrochemical measuring instruments and accessories	9
Fluid mechanics equipment	11
Humidity and moisture measuring instruments	15
Hydrological instruments	31
Industry specific software	1
Information exchange software	1
Metals and metallurgy and structural materials testing instruments	15
Meteorological instruments	16
Network applications software	1
Pipettes and liquid handling equipment and supplies	16
Sampling equipment	12
Soil measuring equipment	20

Not all positions in these occupations will necessarily use all of the listed tools and technologies. The exclusivity rating is an indication of how unique the tool or technology is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations use that tool or technology.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.